

REMARKS

Claims 1-41 are pending in the application. Claims 1, 14 and 31 have been amended. Claims 42-49 have been added. No new subject matter has been added. Support for the new claims may be found throughout the specification.

Claim Rejection 35 U.S.C. § 103

The Patent Office rejected claims 1-3, 8, 9, 14, 15, 24, 25 and 28 under 35 U.S.C. § 103(a) as being unpatentable over Song et al., U.S. Patent No. 6,046,721 (Song) in view of Iwaki, U.S. Patent No. 6,567,097 (Iwaki) and Lan et al. (US2003/0128970) (Lan).

The Patent Office rejected claims 4-7, 16-19, 31-34 and 37-39 under 35 U.S.C. § 103(a) as being unpatentable over Song in view of Iwaki, Lan, and York, U.S. Patent No. 5,850,340 (York).

The Patent Office rejected claims 12, 13, 29, and 30 under 35 U.S.C. § 103(a) as being unpatentable over Song in view of Iwaki, Lan and Ersoz et al., U.S. Patent No. 5,287,189 (Ersoz).

The Patent Office rejected claims 35, 36, 40 and 41 under 35 U.S.C. § 103(a) as being unpatentable over Song in view of Iwaki, Lan, Ersoz, and York.

The Patent Office rejected claims 10, 11, 20-23, 26, and 27 under 35 U.S.C. § 103(a) as being unpatentable over Song in view of Iwaki, Lan, York, and McGraw et al., U.S. Patent No. 6,300,980 (McGraw).

Applicant respectfully traverses the rejections. Applicant respectfully submits claims 1-41 include novel and nonobvious elements that are not taught, disclosed or suggested by the cited prior art references. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Ryoka*, 180 U.S.P.Q. 580 (C.C.P.A. 1974). *See also In re Wilson*, 165 U.S.P.Q. 494 (C.C.P.A. 1970). Also, “in

order to render a claimed apparatus or method obvious, the prior art must enable one skilled in the art to make and use the apparatus or method.” *Rockwell Int’l Corp. v. United States*, 147 F. 3d 1358, 47 U.S.P.Q.2d 1027, 1032 (Fed. Cir. 1998) (citing *Motorola, Inc. v. Interdigital Tech. Corp.*, 121 F. 3d 1461, 1471, 43 U.S.P.Q.2d 1481, 1489 (Fed. Cir. 1997)). Therefore, “a reference published before a patent’s critical date is prior art only for that which the reference enables.” *F.B. Leopold Co. v. Roberts Filter Mfg. Co.*, Civ. App. 96-1218 (Fed. Cir. July 2, 1997) (unpublished) (citing *Beckman Instruments, Inc. v. LKB Produkter AB*, 892 F.2d 1547, 1551, 13 U.S.P.Q.2d 1301, 1304 (Fed. Cir. 1989)).

Claim 1 is directed to a display apparatus for use with a host computer system and generally includes a communication channel that allows information and commands to flow between the host computer system (computer) and the display apparatus, a microprocessor for receiving commands from the computer, the microprocessor having control logic for switching said display apparatus between interlaced and noninterlaced modes of operation in response to commands, and an enabled overlay window. Claim 1 includes elements that are not disclosed, taught, enabled, or suggested by Song in view of Iwaki and Ersoz. Neither Song, Iwaki, nor Ersoz disclose, teach, enable, or suggest individually or in combination a communication channel that allows information and commands to flow between the computer and the display apparatus, a microprocessor for receiving commands from the computer, and the microprocessor having control logic for switching said display apparatus between interlaced and noninterlaced modes of operation in response to commands.

The Patent Office asserts that the VGAFP and the TVFP lines of Song column 3, lines 25-35 (FIG. 1) are equivalent to the communication channel of Claim 1. However, the VGAFP and the TVFP lines of FIG. 1 in Song are not equivalent to the communication channel of Claim 1. The VGAFP and TVFP lines only transfer information from the computer and the television to the display apparatus. The VGAFP and TVFP lines do not transfer commands and do not allow the computer to receive information or commands from the display apparatus. The VGAFP and the TVFP lines of Song do not send commands or receive commands and information. For example, FIG. 1 of Song clearly shows that the signal of the VGAFP and the TVFP lines only go in one direction from the computer or television to the

display apparatus. Also, the VGAFP and the TVFP lines, as found by the Patent Office, are used to send out horizontal and vertical sync signals. The Patent Office asserts that these signals can control and change the display mode of operation of the display apparatus making the signals commands. However, vertical and horizontal sync signals are merely instructions for the monitor, so the monitor knows when and how to display beams of light on the screen of the display apparatus. This information can be formatted for the different modes of operation, interlaced and noninterlaced. However, receiving a signal formatted for one mode of operation will not switch or command the display apparatus to switch between modes; the signal is merely formatted for one specific mode. For example, Song states:

It is then followed by *testing* the frequency and polarity of the horizontal and vertical sync signals. The *consequence of the test* is finally judge of the equivalence. If it is not the same, control signal MOSC is converted into low power level after three seconds. If it is the same, a certain subcircuit among seven control modes which are below the node E of the FIG. 9A is immediately to be enforced on the basis of the frequency and the polarity subbranch of the horizontal and vertical sync signal *which has been obtained by test*

(Song, Column 9, Lines 57-67). Therefore, the VGAFP and TVFP lines simply send out information in one direction from the computer or television to the display apparatus that is tested for by the system and do not send commands or receive commands and information.

The Patent Office asserts that the MCU 9 of FIG. 1 in Song in combination with the MUX disclosed in FIG. 1 of Iwaki is equivalent to the microprocessor of Claim 1. Claim 1 generally recites, “a microprocessor for receiving commands from said host computer system, said microprocessor comprising control logic for switching said display apparatus between said interlaced and noninterlaced modes of operation in response to said commands and enabling an overlay window.” Therefore, the microprocessor of Claim 1 comprises control logic for switching the display apparatus between interlaced and noninterlaced modes of operation in response to commands.

The microprocessor MCU 9 disclosed in Song does not contain control logic for switching the display apparatus between interlaced and noninterlaced modes of operation as found by the Patent Office. The Patent Office asserts that the MUX disclosed in Iwaki contains control logic for switching the display apparatus between interlaced and noninterlaced modes of operation. However, the MUX of FIG. 1 of Iwaki merely selects one of noninterlaced video data or combining noninterlaced video data (column 4 lines 25-31). A multiplexer performs logic functions by combining different data signals and is not a central processing unit or computation engine like a microprocessor. For example, Iwaki states, "The multiplexer (MUX) selects one of *noninterlaced video data* generated by the interlaced data appending circuit 102, and graphics data, *or combines the noninterlaced video data* on the graphics data." Therefore, the MUX of Iwaki cannot implement a command to change the mode of operation between interlaced and noninterlaced modes of operation. Consequently, neither the MUX of Iwaki nor the MCU 9 of Song are equivalent to the microprocessor of Claim 1 because neither are capable of, individually or in combination, implementing a command to change the mode of operation between interlaced and noninterlaced.

Furthermore, it would not have been obvious in view of the art of record to modify Song's display to be computer controlled while the display is in the interlaced television mode of operation because Song's computer does not control the display when the display is in the interlaced television mode of operation.

The Patent Office asserts that Lan discloses the input of the system may accept all ATSC formats and where the system is shown accepting 1080i (interlaced) and 720p (progressive) formats, and that it would have been obvious for one of skill in the art to modify Song's and Iwaki's system to accept ATSC format. Because the system disclosed in Claim 1 is not taught by the combination of Song and Iwaki, applicant respectfully traverses the rejection. Furthermore, neither Song nor Iwaki provides any motivation to combine a system accepting ATSC format to produce a system as taught by Claim 1.

Claim 14 is directed to a computer system comprising a display apparatus and was rejected for the same reasons as the display apparatus claimed in Claim 1. Applicant respectfully traverses these rejections for at least the same reasons given in the traversal of Claim 1.

Claim 31 is directed to method of operating a computer system to control a display apparatus that generally includes a communication channel as generally included in Claim 1. These elements were rejected for the same reasons and prior art as the display apparatus claimed in Claim 1. Applicant respectfully traverses these rejections for at least the same reasons given in the traversal of Claim 1.

Claim 37 is directed to a computer system comprising a communication channel and a microprocessor for receiving commands from the host computer system as generally included in Claim 1. These elements were rejected for the same reasons and prior art as the display apparatus claimed in Claim 1. Applicant respectfully traverses these rejections for at least the same reasons given in the traversal of Claim 1.

Claims 38, 40, 42, and 44 are directed to an overlay window that allows the user to position at least one overlay screen anywhere the user desires. An overlay window that allows the user to position at least one overlay screen anywhere the user desires has not been disclosed by any of the cited references. For example, the cited reference, Ersoz, discloses a 4x3 video being overlaid on top of a 16x9 video (FIG. 1(c)) and does not include an element that allows at least one overlay picture window to be positioned anywhere the user desires.

Claims 39, 41, 43, and 45 are directed to an overlay window that allows the user to utilize other computer functions on at least one of the underlying screens. An overlay window that allows the user to utilize other computer functions on at least one of the underlying screens has not been disclosed by any of the cited references. For example, the cited reference, Ersoz, discloses a 4x3 video being overlaid on top of a 16x9 video (FIG. 1(c)) and does not disclose an element that allows the user to utilize other computer functions on at least one of the underlying screens.

It is contended that all of the claims rejected under this section depend on independent Claims 1, 14, 31, and 37 all of which are non-obvious based on the above rationale. Thus, dependent Claims 2-13, 15-30, and 38-49, which depend on independent Claims 1, 14, and 31 and 37 respectively, should be allowed.

Consequently, Claims 1-49 should be allowed.

Double Patenting

Claim 1 was rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claim 1 of U.S. Patent No. 6,724,351 in view of Lan et al. Enclosed please find a terminal disclaimer in compliance with 37 CFR 1.321(c) to overcome this rejection.


CONCLUSIONS

In light of the forgoing, reconsideration and allowance of the claims is earnestly solicited.

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